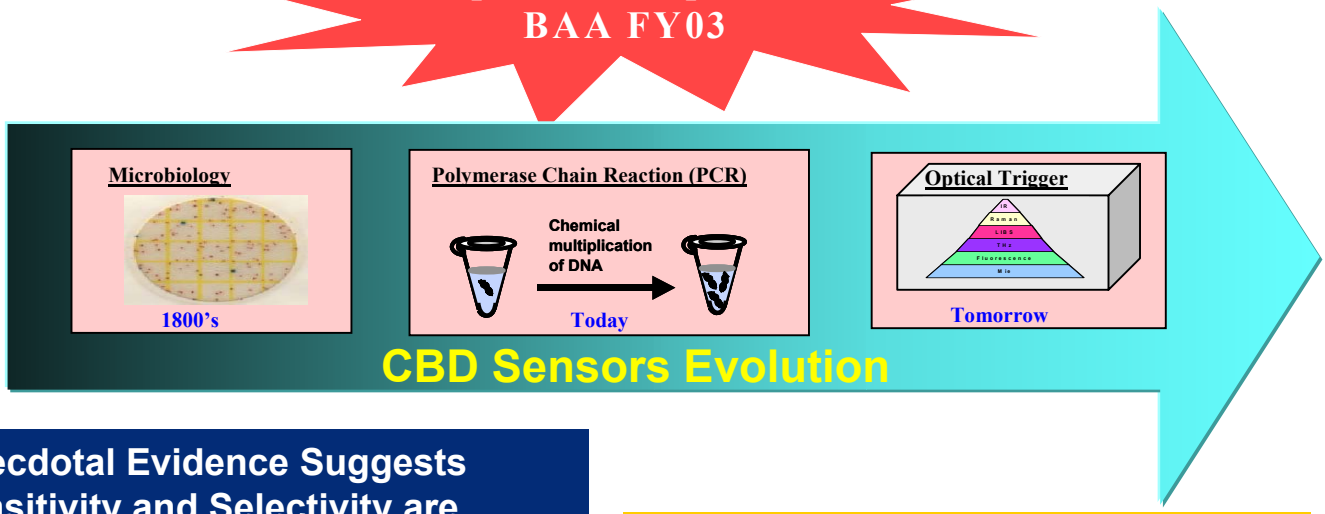
Sensor Systems for Remote Detection of BioAerosols

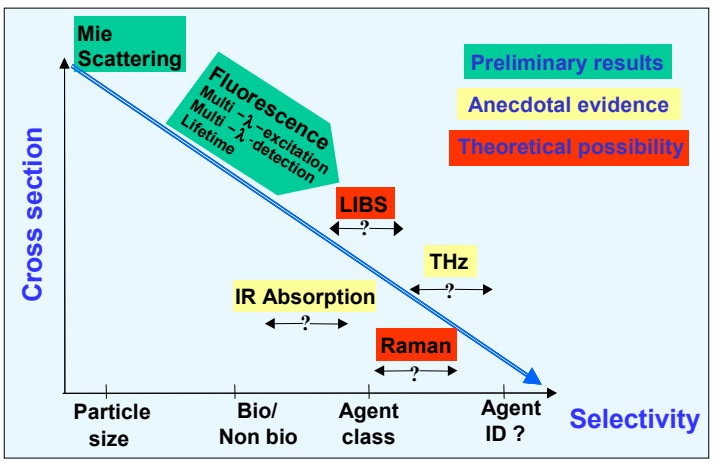
Novel Optical Trigger Sensor for Biological Agents

Program Managers: Tom McCreery (tmccreery@darpa.mil)
Steve Buchsbaum (sbuchsbaum@darpa.mil)

Open for Proposals!
BAA FY03



Anecdotal Evidence Suggests Sensitivity and Selectivity are Inversely Related



Approach

- Develop sensors which exploit optimal combination of spectral bands for false alarm mitigation
- Optimal mathematical design based on all available signatures

Current Status

- Optical BioWarfare Agent trigger sensors have high false alarm rates at typical operating sensitivity
- Extensive anecdotal evidence suggests potential for reduced P_{fa}
  - Fluorescence Spectral Content
  - Other Optical Modes

Goal

- Develop advanced BWA trigger sensors that are fast, sensitive, and highly selective.
- Stretch Goal: 2 orders of magnitude improvement in P_{fa}
- Go-NoGo Goal: 1 order of magnitude improvement in P_{fa}